

REMARKS

This Amendment cancels claims 13-24, adds new claims 25-32, and submits a replacement sheet of drawings. Independent composite claim 25 is based on claims 13, 23 and 24 in view page 5, lines 4-20 of the specification. The impregnation under pressure feature of claim 25 is supported by page 1, lines 32-37 and page 17, lines 25 and 33. The matrix feature of claim 25 is supported by page 18, lines 26 and Fig. 1. Claims 26-31 correspond to claims 14 and 16-20, respectively. Independent method claim 32 also finds support in cancelled claims 13, 23, 24 and page 1, lines 32-37, page 5, lines 4-20, and page 17, lines 25 and 33. The replacement sheet of drawings provides a better copy of the micrograph of Fig. 1. Claims 25-32 are pending.

Examiner Loewe is thanked for the courtesies extended to the undersigned during a telephonic interview held October 6, 2008. Support for the features of claim 25, discussed above, was discussed during the interview, as was replacement of Fig. 1 with a better copy of the micrograph, and submission of a supplemental information disclosure statement. New claims 25-32 are identical to proposed new claims 25-32 discussed during the interview. The

Examiner indicated the features of claim 25 were supported by the application at the conclusion of the interview.

This Amendment overcomes the objection to claim 13, which has been canceled. None of the new claims recite the term "it". Reconsideration and withdrawal of the objection to claim 13 are earnestly requested.

This Amendment overcomes the 35 U.S.C. § 102(b) rejection of claims 13-18, 23 and 24 over U.S. Patent No. 6,387,520 to Fujiki et al. The claimed method includes the step of impregnating the fibrous support by having a specified silicone composition penetrate into the support under pressure. The claimed composite is produced by the same method, and comprises a crosslinked silicone matrix in which said fibrous support is embedded, with the composite having a capillary rise of less than 20 mm when measured according to a T test.

Fujiki et al. discloses a liquid silicone rubber formulation which may be used to coat a fibrous support, as well as an airbag fabric coated with the cured coating.

A. Impregnating by Penetration Under Pressure

Fujiki et al. fails to disclose impregnating a fibrous support by having a silicone composition penetrate into the support under

pressure. Instead, Fujiki et al. teaches "the coating method is not critical" (Col. 8, lines 8-10). Its examples employ a knife coater to produce a minimum uniform coverage (Col. 8, lines 51-54).

B. Composite

Fujiki et al. fails to expressly disclose the claimed composite, comprising a cured silicone matrix in which a fibrous support is embedded. Instead, Fujiki et al. discloses a fabric having a thin film of silicone elastomer on its surface. See Col. 2, lines 19-20 and Col. 8, line 14. Such a coating is not a cured silicone matrix in which a fibrous support is embedded.

Fujiki et al. fails to expressly disclose a composite having a capillary rise of less than 20 mm when measured according to a T test.

Fujiki et al. also fails to inherently disclose the claimed composite. To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. See In re Robertson, 169 F.3d 743, 745, 49

USPQ2d 1949, 1950-51 (Fed. Cir. 1999). In this case, Fujiki et al. discloses its liquid silicone rubber composition does not require a solvent because of improved infiltration, adhesion and thin coating ability (Col. 8, lines 8-10). However, this "improved infiltration" property does not mean the Fujiki et al. process necessarily and inevitably produces the claimed composite, i.e., a matrix in which a fibrous support is embedded. This is particularly true given its use of a knife coater to form a thin film of silicone on the airbag fabric. A knife coater does not exert pressure on the fibrous support to squeeze the silicone composition throughout the fibrous material. Even assuming the Fujiki et al. silicone composition slightly infiltrates the fibrous material, it will not necessarily and inevitably produce a composite impregnated right to the core and comprising a matrix in which the fibrous support is embedded.

Fujiki et al. also fails to inherently disclose a composite having a capillary rise of less than 20 mm when measured by a T test. In this regard, not all crosslinkable silicone compositions can be impregnated into a fibrous substrate and cured to produce a composite having the required capillary rise of less than 20mm. Instead, the inventors have discovered a three step method of

selecting - from numerous possible crosslinkable silicone compositions such as those disclosed by Fujiki et al. - those compositions which will result in the claimed composite. More specifically, this method includes the following steps:

1. Starting from a group of silicone compositions which have the above mentioned components ((a), (b), (c)...),
2. selecting in this group, the species having a viscosity between 1000 and 7000 mPa.s at 25°C,
3. Refining the selection by submitting these 100-7000 mPa.s silicone compositions to a test consisting of:
 - A. forming samples of 2mm thickness test plaques for measuring tensile strength and samples of 6mm thickness pins for measuring hardness;
 - B. crosslinking these samples in a fan oven, during 30 minutes, at 150°C., and
 - C. selecting the 1000-7000 mPa.s compositions whose corresponding samples have a Shore A hardness of at least 2, a tensile strength of at least 0.5 N.mm⁻¹ and/or an elongation at break of at least 50%.

See, in particular, page 18, example I.5 of the specification.

This inventive and objective method for selecting the silicone raw material makes it possible to definitively obtain a composite having a capillary rise of less than 20 mm. In contrast, not all the Fujiki et al. silicone compositions will produce a composite having a capillary rise of less than 20mm, even when impregnated right to the core of the fibrous support.

Reconsideration and withdrawal of the anticipation rejection of claims 13-18, 23 and 24 over Fujiki et al. are earnestly requested.

The 35 U.S.C. § 103(a) rejection of claim 21 over Fujiki et al. is mooted by the cancellation of that claim. Reconsideration and withdrawal of the obviousness rejection of claim 21 are requested.

The 35 U.S.C. § 103(a) rejection of claim 19 over Fujiki et al. in view of U.S. Patent No. 5,658,674 to Lorenzetti et al. is traversed. As discussed above, the claimed method includes the step of impregnating the fibrous support by having a silicone composition penetrate into the support under pressure. The claimed composite is produced by the same method, and comprises a matrix in which said fibrous support is embedded, with the composite having a capillary rise of less than 20 mm.

The cited combination of references fails to raise a prima facie case of obviousness against the claimed method and composite. Fujiki et al. fails to disclose or suggest impregnating a fibrous support by having a silicone composition penetrate into the support under pressure. Instead, Fujiki et al. teaches "the coating method is not critical", and its examples employ a knife coater to produce a thin film having minimum uniform coverage. Nor is there any suggestion that the Fujiki et al. coated airbag fabric is impregnated right to the core, such that it comprises a matrix in which the airbag fabric is embedded, or that the Fujiki et al. coated airbag fabric will have a capillary rise of less than 20 mm, when measured according to a T test.

The deficiencies of Fujiki et al. are not remedied by the additional disclosure of Lorenzetti et al., which also fails to disclose or suggest impregnating a fibrous support by having a silicone composition penetrate into the support under pressure. Instead, Lorenzetti et al., teaches coating its silicone composition onto an airbag fabric "by any suitable means", and suggests a doctor blade or roll (Col. 8, lines 46-50). There is no disclosure or suggestion that the Lorenzetti et al. coated airbag fabric is impregnated right to the core, such that it comprises a

matrix in which the airbag fabric is embedded, with the composite having a capillary rise of less than 20 mm.

One of ordinary skill in the art is given no motivation or apparent reason to modify the combined disclosures of Fujiki et al. and Lorenzetti et al. by replacing their non-pressure coating methods with a pressure coating method. Reconsideration and withdrawal of the obviousness rejection of claim 19 are earnestly requested.

The 35 U.S.C. § 103(a) rejection of claims 13-24 over Lorenzetti et al. in view of Fujiki et al. is traversed for the same reasons discussed above. The combined disclosure of the references is not changed or expanded by their order in the rejection. Reconsideration and withdrawal of the obviousness rejection of claims 13-24 over Lorenzetti et al. in view of Fujiki et al. are earnestly requested.

The obvious-type double patenting rejection of claims 13 and 16-21 over claims 1-4, 6, 9-11 and 13 of U.S. Patent No. 6,586,551 to Bohin et al. is traversed. The claimed method includes the step of impregnating the fibrous support by having a silicone composition penetrate into the support under pressure. The claimed

composite is produced by the same method, and comprises a matrix in which said fibrous support is embedded.

The claims of this application are patentably distinct from those of Bohin '551. None of the Bohin '551 claims are method claims. Moreover, none of the Bohin '551 coating composition and two-component system claims define a composite comprising a matrix in which a fibrous support is embedded. Reconsideration and withdrawal of the obvious-type double patenting rejection of claims 13 and 16-21 over the claims of Bohin '551 are respectfully requested.

The obvious-type double patenting rejection of claims 13 and 16-21 over claims 1-4, 6, 9-11 and 17 of U.S. Patent No. 6,562,737 to Bohin et al. is traversed. The claimed method includes the step of impregnating the fibrous support by having a silicone composition penetrate into the support under pressure. The claimed composite is produced by the same method, and comprises a matrix in which a fibrous support is embedded.

The claims of this application are patentably distinct from those of Bohin '737. None of the Bohin '737 claims are method claims, and none of its composition, flexible substrate, coated substrate claims define a composite comprising a matrix in which a

fibrous support is embedded. Reconsideration and withdrawal of the obvious-type double patenting rejection of claims 13 and 16-21 over the claims of Bohin '737 are respectfully requested.

The obvious-type double patenting rejection of claims 13 and 16-21 over claims 1-4, 6, 9-11 and 17 of U.S. Patent No. 5,783,311 to Lorenzetti et al. is traversed. The claimed method includes the step of impregnating the fibrous support by having a silicone composition penetrate into the support under pressure. The claimed composite is produced by the same method, and comprises a matrix in which a fibrous support is embedded.

The claims of this application are patentably distinct from those of Lorenzetti '311. None of the Lorenzetti '311 claims are method claims. Moreover, none of the Lorenzetti '311 substrate, or vehicular airbag claims define a composite comprising a matrix in which a fibrous support is embedded. Reconsideration and withdrawal of the obvious-type double patenting rejection of claims 13 and 16-21 over Lorenzetti '311 are respectfully requested.

The obvious-type double patenting rejection of claims 13 and 16-21 over claims 1-4, 6, 9, 10 and 17 of U.S. Patent No. 5,658,674 to Lorenzetti et al. is traversed. The claimed method includes the step of impregnating the fibrous support by having a silicone

composition penetrate into the support under pressure. The claimed composite is produced by the same method, and comprises a matrix in which a fibrous support is embedded.

The claims of this application are patentably distinct from those of Lorenzetti '674. None of the Lorenzetti '674 claims are method claims. Moreover, none of the Lorenzetti '674 claims define a composite comprising a matrix in which a fibrous support is embedded. Reconsideration and withdrawal of the obvious-type double patenting rejection of claims 13 and 16-21 over the claims of Lorenzetti '674 are respectfully requested.

The replacement drawings sheet merely provides a better copy of the micrograph of Fig. 1. No change to Figs. 1 or 2 has been made. Accordingly, replacement of the original sheet of drawings with the attached replacement sheet is respectfully requested.

A Supplemental Information Disclosure Statement is attached.

It is believed this application is in condition for allowance. Reconsideration and withdrawal of all rejections of claims 13-24, and issuance of a Notice of Allowance directed to claims 25-32, are earnestly requested. The Examiner is urged to telephone the undersigned should he believe any further action is required for allowance.

U.S. Appln. S.N. 10/522,578
AMENDMENT

PATENT

The fee for the extension of time is being paid electronically today. It is not believed any additional fee is required for entry and consideration of this Amendment. Nevertheless, the Commissioner is authorized to charge Deposit Account No. 50-1258 in the amount of any such required fee.

Respectfully submitted,

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Enclosures:

Replacement Drawings Sheet
Petition for Extension of Time
Supplemental Information Disclosure Statement